

# Claims

[c1] An overhead area access staircase stowage system comprising:

at least one servicing unit comprising;

at least one stowage unit; and

a staircase proximate to said at least one stowage unit and having a stowed state and a deployed state, said staircase comprising;

a plurality of stair elements; and

a state actuating system transitioning said stair elements between said stowed state and said deployed state.

[c2] A staircase stowage system as in claim 1 wherein said servicing unit comprises:

a first portion comprising;

a first stowage unit; and

said staircase; and

a second portion comprising a second stowage unit.

[c3] A staircase stowage system as in claim 2 wherein said first portion comprises a platform member corresponding with a staging area.

[c4] A staircase stowage system as in claim 3 wherein said

platform member is a stair element of said staircase.

- [c5] A staircase stowage system as in claim 2 wherein said second portion comprises a platform member corresponding with a staging area.
- [c6] A staircase stowage system as in claim 1 wherein said staircase comprises at least one stowage module.
- [c7] A staircase stowage system as in claim 1 further comprising at least one divider separating stowage units of said at least one stowage unit.
- [c8] A staircase stowage system as in claim 7 wherein said at least one divider separates said staircase and said at least one stowage unit.
- [c9] A staircase stowage system as in claim 1 further comprising a plurality of cart bumpers coupled to said at least one divider.
- [c10] A staircase stowage system as in claim 1 further comprising a plurality of cart bumpers coupled to said at least one stowage unit and guiding stowage of at least one service cart.
- [c11] A staircase stowage system as in claim 1 wherein said at least one stowage module resides between stair elements of said plurality of stair elements.

- [c12] A staircase stowage system as in claim 1 wherein said staircase comprises at least one access panel coupled to said plurality of stair elements and allowing access to said at least one stowage module.
- [c13] A staircase stowage system as in claim 1 wherein said state actuating system comprises:  
a plurality of rollers;  
a U-shaped stair support member transitioning between states on said plurality of rollers;  
a potential energy device coupled to said U-shaped stair support member and assisting transition of said staircase between said stowed state and said deployed state.
- [c14] A staircase stowage system as in claim 13 wherein said rollers guide transition of and support said staircase.
- [c15] A staircase stowage system as in claim 13 further comprising at least one service cart retainer coupled to said U-shaped stair support member.
- [c16] A staircase stowage system as in claim 1 further comprising at least one service cart retainer coupled to said staircase.
- [c17] A staircase stowage system as in claim 1 further comprising at least one release mechanism allowing actua-

tion of said staircase.

- [c18] A staircase stowage system as in claim 1 wherein said state actuating system comprises a deployment handle.
- [c19] A staircase stowage system as in claim 1 wherein said state actuating system comprises a motor.
- [c20] A staircase stowage system as in claim 1 wherein said plurality of stair elements have a plurality of shapes.
- [c21] A staircase stowage system as in claim 1 wherein said staircase further comprises at least one staging element.
- [c22] A staircase stowage system as in claim 1 wherein said staircase is deployable from at least one of a ceiling and a floor.
- [c23] A staircase stowage system as in claim 1 wherein said staircase has a stowed state substantially above a service cart level and a deployed state substantially at said service cart level.
- [c24] A staircase stowage system as in claim 1 wherein said at least one servicing unit is approximately one or more service carts deep.
- [c25] A staircase stowage system as in claim 1 wherein said staircase is approximately one or more service carts

deep.

[c26] A staircase stowage system as in claim 1 wherein said at least one servicing unit comprises:  
at least one platform member; and  
at least one worktable.

[c27] A staircase stowage system as in claim 1 wherein said plurality of stair elements comprises:  
parallel step elements; and  
angled step elements.

[c28] An aircraft comprising:  
a galley comprising;  
at least one stowage unit; and  
a staircase proximate to said at least one stowage unit and having a stowed state and a deployed state, said staircase comprising;  
a plurality of stair elements; and  
a state actuating system transitioning said stair elements between said stowed state and said deployed state.

[c29] An aircraft as in claim 7 wherein said at least one stowage unit comprises at least one service cart stowage unit.

[c30] An overhead area access staircase stowage system comprising:

at least one service cart stowage unit;  
at least one stowage module; and  
a staircase proximate to said at least one service cart stowage unit, coupled to said at least one stowage module, and having a stowed state and a deployed state, said staircase comprising;  
a plurality of stair elements; and  
a state actuating system transitioning said stair elements between said stowed state and said deployed state.

[c31] A staircase stowage system as in claim 30 wherein said staircase is deployable within said at least one stowage unit and comprises said at least one stowage module.

[c32] A method of accessing an overhead area and stowing objects within a stowage unit of an aircraft comprising:  
accessing a staircase within a stowage unit;  
releasing said staircase;  
deploying said staircase within said stowage unit comprising;  
releasing a plurality of stair elements; and  
supporting said plurality of stair elements;  
ascending said plurality of stair elements;  
interacting with the overhead area; and  
stowing said staircase.

[c33] A method as in claim 32 further comprising stowing ob-

jects within said staircase.

- [c34] A method as in claim 32 further comprising retaining service carts within said stowage unit.
- [c35] A method as in claim 34 wherein retaining service carts comprises the rotation of retainers coupled to at least one of a staircase base and a staging area platform member.
- [c36] A method as in claim 32 further comprising stowing at least one service cart below at least one of a worktable and a platform member before deploying said staircase.
- [c37] An aircraft comprising:
  - an aircraft structure having at least one overhead area;
  - and
  - a staircase system comprising;
  - at least one stowage module; and
  - a staircase having a stowed state and a deployed state within a stowage unit, said staircase comprising;
  - a plurality of stair elements; and
  - a state actuating system transitioning said stair elements between said stowed state and said deployed state;
  - said staircase when in said deployed state providing access to the overhead area.
- [c38] An aircraft as in claim 37 wherein said at least one

stowage module reside between stair elements of said plurality of stair elements.

[c39] An aircraft as in claim 37 wherein said staircase system further comprises a service cart stowage unit.

[c40] A system as in claim 37 wherein said overhead area has a multiple service cart depth.